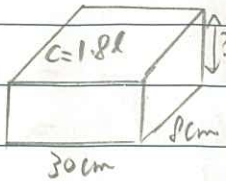


# My Pals 6B Chapter 11

Let's Practise! 11b (p. 116 - p. 118)

(Q 1, 3, 5, 7, 9)

1. The height of the tank =  $\frac{\text{Volume}}{\text{base area}}$



$$= \frac{(1.8 \times 1000) \text{ cm}^3}{30 \text{ cm} \times 8 \text{ cm}}$$

$$= \frac{1800}{30 \times 8} \text{ cm}$$

$$= 7.5 \text{ cm}$$

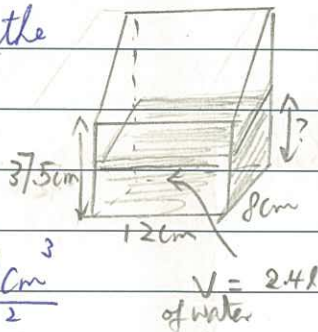
- 3.a) The height of the water =

$$= \frac{\text{Vol}}{\text{base area}}$$

$$= \frac{(2.4 \times 1000) \text{ cm}^3}{(12 \times 8) \text{ cm}^2}$$

$$= \frac{2400}{12 \times 8} \text{ cm}$$

$$= 25 \text{ cm}$$



- b) The height of the remaining part =  $37.5 \text{ cm} - 25 \text{ cm} = 12.5 \text{ cm}$

i. The amount of water need to poured into the tank

$$= (12.5 \times 12 \times 8) \text{ cm}^3 \div 1000 \text{ cm}^3$$

$$= 1200 \text{ cm}^3 \div 1000 \text{ cm}^3$$

$$= 1.2 \text{ l.}$$

5.

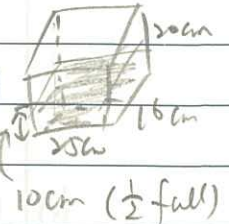
- a) The volume of water (in l)

$$= (25 \text{ cm} \times 16 \text{ cm} \times \frac{2}{2} \text{ cm})$$

$$\div 1000 \text{ cm}^3$$

$$= 4000 \text{ cm}^3 \div 1000 \text{ cm}^3$$

$$= 4 \text{ l.}$$



- b) If 1.5 l of water is poured out there are  $4 \text{ l} - 1.5 \text{ l} = 2.5 \text{ l}$

The new height of the water level

$$= \frac{2.5 \times 1000 \text{ cm}^3}{25 \text{ cm} \times 16 \text{ cm}}$$

$$= \frac{2500 \text{ cm}^3}{400 \text{ cm}^2}$$

$$= 6.25 \text{ cm}$$

6. Let the edge of the tank be  $x \text{ cm}$

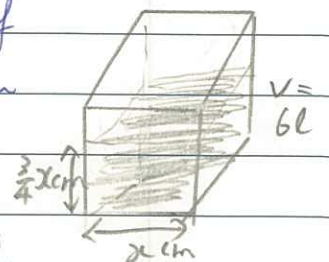
Since the cube is  $\frac{3}{4}$  full, i.e. the height of water is  $\frac{3}{4}x \text{ cm}$

$$x \times x \times \frac{3}{4}x = 6 \text{ l}$$

$$x^3 = 6000 \text{ cm}^3 \times \frac{4}{3}$$

$$x = \sqrt[3]{8000 \text{ cm}^3}$$

$$x = 20 \text{ cm}$$



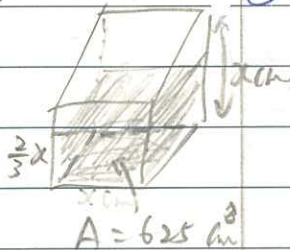
$$\begin{array}{r} 2 \overline{) 8000} \\ 4000 \\ \hline 4000 \\ 2000 \\ \hline 2000 \\ 1000 \\ \hline 1000 \\ 1000 \\ \hline 0 \end{array}$$

$$2 \times 10 = 20 \text{ cm}$$

(7a) The length of one side of the base:

$$\sqrt{625}$$

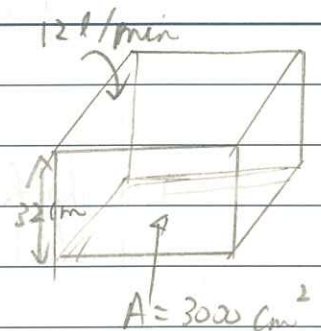
$$= 25$$



(9) The volume of half of the tank:

$$= 16 \times 3000 \text{ cm}^3$$

$$= 48000 \text{ cm}^3$$



b) Volume of water = 15l = 15000 cm³

Let the be  $x$  cm

$$V = 625 \times \frac{2}{3}x$$

$$x = \frac{V}{625} \times \frac{3}{2}$$

$$x = \frac{15000}{625} \times \frac{3}{2}$$

$$x = 36 \text{ cm}$$

$\therefore$  The height of the tank is 36 cm

(10)  $\begin{array}{r} 625 \\ 5 \overline{) 3125} \\ \underline{3125} \\ 0 \end{array}$

The time to fill half of tank =

$$(48000 \div 12000) \text{ min}$$

$$= 4 \text{ min}$$